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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,554	07/24/2003	Noriyuki Ito	122.1444D2	8101

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EXAMINER	
LIN, SUN J	

ART UNIT	PAPER NUMBER
2825	

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/625,554	ITO ET AL.	
	Examiner	Art Unit	
	Sun J. Lin	2825	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *16-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *16-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☒ Certified copies of the priority documents have been received in Application No. 09/811,772.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *07/24/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to application 10/625,554 filed on 07/24/2003. Claims 1 – 15 have been cancelled without prejudice. Claims 16 – 27 remain pending in the application.

Specification Objections

2. The specification is objected to because of following informalities:

Page 6, line 2, change "date" to —**data**—.
Page 9, line 32, change "S13" to —**S14**—.

Appropriate correction is required.

Claim Objections

3. Claims listed below are objected to because of the following informalities:

Claim 17, line 6, before "contents" delete —**the**—.
Claim 18, line 6, change "the user" to —**a user**—.
Claim 18, line 6, before "information" insert —**processing-related**—.
Claim 18, line 7, before "information" insert —**processing-related**—.
Claim 20, line 5, before "wiring" insert —**and**—.
Claim 21, line 5, change "the catalog" to —**a catalog**—.
Claim 21, line 6, before "placement" insert —**said**—.
Claim 22, line 5, change "said respective pieces" to —**each of said a plurality of pieces**—.
Claim 23, line 4, before "placement" insert —**said plurality of pieces of**—.
Claim 23, line 5, change "the placement" insert —**one of said plurality of pieces of placement**—.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 16 and 19 are rejected under 35 U.S.C. 102(b) as being unpatentable over U.S. Patent No. 5,050,091 to *Rubin*.

6. As to Claim 16, *Rubin* shows and discloses the following subject matter:

- A method of controlling (net) connectivity and polygon placement of electrical circuits while modifying the design of such circuits – [col. 1, line 17 – 21; col. 2, line 1 – 21];
- *Graphic editor* (i.e., interactive editor) for use in *graphic design* ...displaying and manipulating both (net) connectivity and polygon geometry placement – [col. 2, line 38 – 43]; revise (i.e., modify) desired (design) records of a database – [col. 6, line 45 – 46]; When a change (i.e., modification) to a node is requested, that change is made to a database – [col. 4, line 19 – 21]; All of the resulting changes are preserved (i.e., stored) in a database – [col. 4, line 39 – 41]; database change means 616 for updating the database 615 – [Fig. 6; col. 6, line 26 – 30]; Notice that (1) a graphic editor is performed by a *computer process program* to graphically modify graphic information on placement of polygons and wiring connectivity of a electric circuit (2) modified information is stored in a database;
- Results (i.e., modified information) are displayed to user on display monitor – [col. 6, line 14 – 25].

For reference purposes, the explanations given above in response to Claim 16 are called **[Response A]** hereinafter.

7. As to Claim 19, *Rubin* shows and discloses the following subject matter:

- Displaying on a (graphic) editor screen placement and wiring graphic information for operation through a placement and wiring processing program – **[Response A]**;
- Affixing a "mark" to the placement and wiring graphic information displayed on the graphic editor screen – [Fig. 4; Fig. 5; col. 20, line 52 – col. 24, line 63]; Notice that (1) a "mark" is a "*notification flag*" to be displayed on the graphic editor screen (2) it is an industrial standard – a (notification) flag can be

activated/deactivated for showing on the graphic editor screen by a display designation command as an option.

8. Claims 17, 18, 20 – 24, 26 and 27 are rejected under 35 U.S.C. 102(b) as being unpatentable over U.S. Patent No. 5,847,968 to *Miura et al.*

9. As to Claim 17, *Miura et al.* show and disclose the following subject matter:

- *Interactive editor* for use in correcting (i.e., modifying) layout and routing (i.e., placement/net wiring) in a PCB of a circuit design – [col. 3, line 19 – 37]; *Graphic display* (i.e., *editor screen*) for display *placement and wiring graphic information* (i.e., component, route and area occupied by a component et al.) when packaging *design application program* is executed – [col. 14, line 29 – 33]; Notice that interactive editor displaying graphical results on an editor screen;
- *Selecting* and *determining* (i.e., *designating*) the *placement and wiring graphic information* sequentially (i.e., one after another being read out from a placement order storage unit) and displaying contents associated with the *placement and wiring graphic information* so selected and determined (designated) – [col. 3, line 50 – col. 4, line 16].

10. As to Claim 18, *Miura et al.* show and disclose the following subject matter:

- *Interactive editor* for use in correcting (i.e., modifying) layout and routing (i.e., placement/net wiring) in a PCB of a circuit design – [col. 3, line 19 – 37]; *Graphic display* (i.e., *editor screen*) for display placement and wiring graphic information when packaging *design application program* is executed – [col. 14, line 29 – 33]; Notice that interactive editor displaying graphical results on an editor screen;
- *Reading out processing-related information* (e.g., *a new component*, *an area occupied by a component*, a *latest component etc.*) associated with placement and wiring which is stored in a *storage unit* and is designated by a *designer* (i.e., *user*) using *read-out unit* – [col. 3, line 50 – col. 4, line 16; Fig. 9];
- *Displaying* a set of menu regarding the processing-related information so readout on the editor screen by relating the processing-related information to the placement and wiring graphic information – [Fig. 9].

For reference purposes, the explanations given above in response to Claim 17 are called **[Response B]** hereinafter.

11. As to Claim 20, *Miura et al.* show and disclose the following subject matter:

- *Interactive editor* for use in correcting (i.e., modifying) layout and routing (i.e., placement/net wiring) in a PCB of a circuit design – [col. 3, line 19 – 37]; *Graphic display* (i.e., *editor screen*) for display *placement and wiring graphic information* (i.e., component, route and area occupied by a component et al.) when packaging *design application program* is executed – [col. 14, line 29 – 33]; Notice that interactive editor displaying graphical results on an editor screen;
- Selecting an area containing displayed placement and wiring graphic information and replacing the placement and wiring graphic information within the selected area in according with a placement designation information – [Fig. 17A; Fig. 17B; Fig. 17C].

12. As to Claim 21, *Miura et al.* show and disclose the following subject matter:

- *Interactive editor* for use in correcting (i.e., modifying) layout and routing (i.e., placement/net wiring) in a PCB of a circuit design – [col. 3, line 19 – 37]; *Graphic display* (i.e., *editor screen*) for display *placement and wiring graphic information* (i.e., component, route and area occupied by a component et al.) when packaging *design application program* is executed – [col. 14, line 29 – 33]; Notice that interactive editor displaying graphical results on an editor screen;
- Register on a *catalog* (i.e., *list of design candidate information*) placement-related information associated with respective placed pieces of the *placement and wiring graphic information* on the editor screen – [col. 13, line 35 – 43; Fig. 6A].

13. As to Claim 22, *Miura et al.* show and disclose the following subject matter:

- *Interactive editor* for use in correcting (i.e., modifying) layout and routing (i.e., placement/net wiring) in a PCB of a circuit design – [col. 3, line 19 – 37]; *Graphic display* (i.e., *editor screen*) for display *placement and wiring graphic information* (i.e., component, route and area occupied by a component et al.) when packaging *design application program* is executed – [col. 14, line 29 –

33]; Notice that interactive editor displaying graphical results on an editor screen;

- Selecting routing pattern information (i.e., connecting relationship information) – [col. 13, line 13 – 21; Fig. 19A];
- Highlighting the selected connecting relationship information on the editor screen – [Fig. 18B].

14. As to Claim 23, *Miura et al.* show and disclose the following subject matter:

- *Interactive editor* for use in correcting (i.e., modifying) layout and routing (i.e., placement/net wiring) in a PCB of a circuit design – [col. 3, line 19 – 37]; *Graphic display* (i.e., *editor screen*) for display *placement and wiring graphic information* (i.e., component, route and area occupied by a component et al.) when packaging *design application program* is executed – [col. 14, line 29 – 33]; Notice that interactive editor displaying graphical results on an editor screen;
- *Displaying* in windows on an editor screen a list of names of a plurality of placement and wiring graphic information in a set of tables – [Fig. 5A – Fig. 5D];
- When one of said names of said plurality of pieces of placement and wiring graphic information raised on the list is selected, displaying on the plurality of pieces of placement and wiring graphic information so selected in accordance with a predetermined placing coordinates (i.e., position information) – [Fig. 5A – Fig. 5D].

15. As to Claim 24, *Miura et al.* show and disclose the following subject matter:

- *Interactive editor* for use in correcting (i.e., modifying) layout and routing (i.e., placement/net wiring) in a PCB of a circuit design – [col. 3, line 19 – 37]; *Graphic display* (i.e., *editor screen*) for display *placement and wiring graphic information* (i.e., component, route and area occupied by a component et al.) when packaging *design application program* is executed – [col. 14, line 29 – 33]; Notice that interactive editor displaying graphical results on an editor screen;
- When said displayed placement and wiring graphic information is moved on the editor graphic screen, designation a direction in which said displayed information is moved – [Fig. 26; Fig. 27].

16. As to Claim 26, *Miura et al.* show and disclose the following subject matter:

- *Interactive editor* for use in correcting (i.e., modifying) layout and routing (i.e., placement/net wiring) in a PCB of a circuit design – [col. 3, line 19 – 37]; *Graphic display* (i.e., *editor screen*) for display *placement and wiring graphic information* (i.e., component, route and area occupied by a component et al.) when packaging *design application program* is executed – [col. 14, line 29 – 33]; Notice that interactive editor displaying graphical results on an editor screen.
- Displaying on the editor screen respective pieces of position information associated with a plurality of pieces of placement and wiring graphic information – [Fig. 5A – Fig. 5D];
- Checking on positional relationships between the displayed respective pieces of position information in accordance with already determined placement positions (i.e., placement rule) which is read out – [col.3, line 50 – col.4, line 16].

17. As to Claim 27, *Miura et al.* show and disclose the following subject matter:

- *Interactive editor* for use in correcting (i.e., modifying) layout and routing (i.e., placement/net wiring) in a PCB of a circuit design – [col. 3, line 19 – 37]; *Graphic display* (i.e., *editor screen*) for display *placement and wiring graphic information* (i.e., component, route and area occupied by a component et al.) when packaging *design application program* is executed – [col. 14, line 29 – 33]; Notice that interactive editor displaying graphical results on an editor screen;
- Displaying on an editor screen an area containing a plurality of pieces of placement and wiring graphic information and displaying said area by a frame to which a painted-out pattern is affixed – [Fig. 17A – Fig. 17C].

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

(1). Determining the scope and contents of the prior art.
(2). Ascertaining the differences between the prior art and the claims at issue.
(3). Resolving the level of ordinary skill in the pertinent art.
(4). Considering objective evidence present in the application indicating obviousness or nonobviousness.

19. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,847,968 to *Miura et al.* in view of *Power Point* software program to *Microsoft*.

20. As to Claim 25, *Miura et al.* show and disclose the following subject matter:

- *Interactive editor* for use in correcting (i.e., modifying) layout and routing (i.e., placement/net wiring) in a PCB of a circuit design – [col. 3, line 19 – 37]; *Graphic display* (i.e., *editor screen*) for display *placement and wiring graphic information* (i.e., component, route and area occupied by a component et al.) when packaging *design application program* is executed – [col. 14, line 29 – 33]; Notice that interactive editor displaying graphical results on an editor screen.

Miura et al. teach all subject matter listed above, they do not teach designing the placement and wiring graphic information and selecting a copy command to copy the placement and wiring graphic information to a designated position on the editor screen. But, it is well known that commercial available *Power Point* software program has capabilities of graphically designing polygons and interconnect wires (i.e., placement and wiring graphic information) and selecting a copy command to copy the placement and wiring graphic information to a designated position on an editor screen.

Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have integrated Power Point software program in an interactive editor for providing capabilities of graphically designing polygons and interconnect wires (placement and wiring graphic information) and selecting a copy

command to copy the placement and wiring graphic information to a designated position on an editor screen in order shorten development time.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sun J Lin whose telephone number is (571) 272 - 1899. The examiner can normally be reached on Monday-Friday 9:30AM - 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew S Smith can be reached on (571) 272 - 1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sun James Lin
Patent Examiner
Art Unit 2825
July 31, 2005